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**Determinants of multiple maize technology package adoption in Ethiopia: evidence from the sidama region****Ashenafi Guye***Candidate in the Department of Agricultural Economics, Haramaya University, Ethiopia*

**Statement of the problem:** The adoption of improved agricultural technology packages is vital in Ethiopia, as the expansion of cultivable land appears nearly exhausted and population size has skyrocketed. However, the country has shown a low adoption rate. The purpose of the study is to investigate the factors that hinder or facilitate the adoption of multiple maize technology packages and the intensity of adoption in the northern Sidama zone of Ethiopia. Methodology of the study: A multistage sampling procedure was applied to gather cross-sectional data from 424 farm households owning 545 maize plots. A multivariate probit and two-limit Tobit models were used to address the study objectives. Findings: The conditional probability results confirmed that maize technology packages are complementary (positive relationship). This infers that agriculture-focused policies that influence the adoption of a single component of technology packages can have a reinforcing advantage over the adoption of other technologies. Furthermore, the results from the models showed that farmers with greater experience, family size, plot size, livestock and oxen ownership, number of maize plots owned, of-farm income, and access to credit, extension services, and membership in institutions are more likely to adopt at least one of the improved technology packages and achieved a better status of intensity of adoption. Conclusion: The adoption rate and intensity level were meager and there must be relevant interventions that promote wider adoption for better productivity. This, in turn, helps smallholder farmers to get rid of chronic food insecurity and poverty. Recommendations: It is, therefore, crucial to reinforce and deliver quality extension services, provide credit access, motivate youth to be involved in farming activities, inspire membership, and ease the system to access inputs and technologies for broader adoption of technology packages.

**Biography**

Ashenafi Guye is a PhD candidate in the Department of Agricultural Economics at Haramaya University, Ethiopia. His research focuses on agricultural technology adoption and its role in improving productivity and livelihoods among smallholder farmers. Ashenafi's recent work investigates the determinants of multiple maize technology package adoption in Ethiopia's Sidama region, emphasizing factors such as access to credit, extension services, and institutional membership. His findings highlight the complementary nature of technology packages and the need for targeted interventions to enhance adoption rates, address food insecurity, and reduce poverty among farming communities in Ethiopia.